

# Work Order ID: 85669

June-13-12 1:51:42 PM

Page 1

Item ID: D412-742-013

Revision ID:

Item Name: Float Skidtube Installation

Start Date: 6/13/12 Start Qty: 1.00

Required Date: 6/14/12 Req'd Qty: 1.00

Reference: RMA RA111377

\*N900040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer: CU-DAR001

Approvals: Process Plan: Date: Tooling: Date:

QC: Date: SPC (Y/N): Date:

Run Start \*NR1\*

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr     | Revision Nbr |
|--------------|--------------|
| IIN D412-742 | E            |

100

\*100\*

QC

Quality Control

Memo

INSPECT RA111377  
1 X D412-742-013 B81083

0.00

0.00

110

\*110\*

HandFinish

Hand Finishing

Memo

REMOVE FWD AND AFT WEARPLATES  
HAVE QC TEST FIT SADDLES

RE-INSTALL ORIGINAL FWD AND AFT WEARPLATES AFTER TEST FIT  
OF SADDLES

REMOVE AFT CAP AND FWD CAP-SCRAP/DESTROY

REPLACE

NEW AFT CAP 1 X D2646 B 81974  
NEW FWD CAP 1 X D3401-041 B 83432  
TOUCH UP ANY AREAS A/R

0.00

0.00

|   |                       |     |           |   |  |
|---|-----------------------|-----|-----------|---|--|
| <b>DART</b><br>Dart Aerospace Ltd.<br>1270 ABERDEEN ST.<br>HAWKESBURY, ONT/CANADA K6A 1K7 |                       |     |           | VC APPROVAL # 0482<br>TEL: 1-613-692-6200 |  |
| PN  | D412-742-013          | CHG | CHG007    |   |  |
| DESC  | Float Skidtube        | STC | SR01583SE |   |  |
| LOT   | B81083                | SIC | SH05-37   |   |  |
| MODEL   | 205/210/212/412/AB412 | SIC |           |   |  |
| PATENTS US 5,735,884 CA 2,222,183<br>EUROPEAN NO. 0,082,865                               |                       |     |           | MADE IN CANADA 027292                     |  |

1x f M 1106/19

tribeam  
only  
D412-742-013

Build marks / scratches out per test allow 4 thickness.

12-6-19

# Dart Aerospace Ltd

| W/O:     |      | WORK ORDER CHANGES  |           |                     |          |                                     |                          |
|----------|------|---|-----------|---------------------|----------|-------------------------------------|--------------------------|
| DATE     | STEP | PROCEDURE CHANGE  | By        | Date                | Qty      | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
| 12/06/15 | 110  | Strip & Touch-up Alodine Fwd Extrusion  | JM        | 12/06/15            | XL       | W<br>12/06/21                       | M<br>12/06/21            |
| 12/06/15 | 110  | Powder Coat + QC3 PART Finish<br>START: 10:40=<br>TEMP: 3200 F=<br>Finish: 11:10 M120222 / QC3 inspection PART Finish | M-L<br>BL | 12/06/14<br>12-6-19 | 1X<br>1X | M-L<br>12/06/21                     | M<br>12/06/21            |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

| W/O:     |      | WORK ORDER CHANGES  |    |          |                               |                                     |                          |
|----------|------|---|----|----------|-------------------------------|-------------------------------------|--------------------------|
| DATE     | STEP | PROCEDURE CHANGE  | By | Date     | Qty                           | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
| 12/06/15 | 110  | Assemble with:<br>D2646 / B81974 (end-cap)<br>D3401-041 / B83432 (Tow-cap)  | MM | 12/06/15 | (x1)<br>(x1)                  |                                     |                          |
| 12/06/15 | 110  | AHS4-1032-225 / M121269 (inserts)<br>AN3C4A / M121205 (bolts)<br>NAS1149C0332R / M122063 (washers)<br>D3672-1 / B80369 (Phenolic washers) | MM | 12/06/15 | (x10)<br>(x4)<br>(x4)<br>(x4) |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 85669

\*85669\*

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Item ID: D412-742-013 Accept \*N900040100\* Setup Start \*NS1\*  
 Revision ID: Stop \*NS2\*  
 Item Name: Float Skidtube Installation  
 Start Date: 6/13/12 Start Qty: 1.00 \*1\* Cust Item ID:  
 Required Date: 6/14/12 Req'd Qty: 1.00 \*1\* Customer: CU-DAR001  
 Reference: RMA RA111377

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start \*NR1\*  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description                      | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 120                            | QC5- Inspect part completeness to step on W/O | 0.00                 |         |        |              |               |               |                  |                |
| *120*                          |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |
| 130                            |   |                      |         |        |              |               |               |                  |                |
| *130*                          |   |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo  |                      |         |        |              |               |               |                  |                |
| Packaging                      | ENSURE ORIGINAL KIT IS IN BOX                 |                      |         |        |              |               |               |                  |                |
| 140                            |   |                      |         |        |              |               |               |                  |                |
| *140*                          |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo  |                      |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

*was shipped out on another w/o. - will be closed and pulled on D412-742-013 #85243*

*12.06.20*

**Work Order ID 85669****\*85669\***

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June-13-12 1:51:42 PM

Item ID: D412-742-013

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Float Skidtube Installation

Start Date: 6/13/12 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 6/14/12 Req'd Qty: 1.00

**\*1\***

Customer: CU-DAR001

Reference: RMA RA111377

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

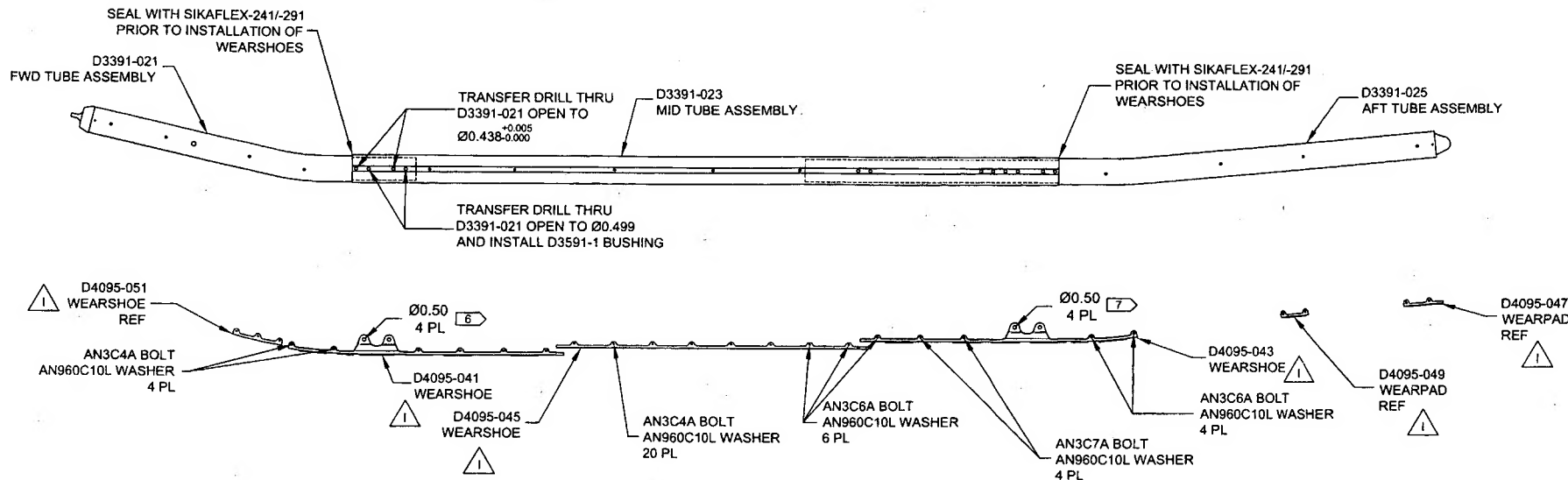
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description  | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 150                            |   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*150*</b>                   |   |                      |         |        |              |               |               |                  |                |
| Packaging                      | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Packaging                      | REPACKAGE PER PPP USING NEW B/N<br>NEW LABELS AND PAPERWORK REQ'D |                      |         |        |              |               |               |                  |                |
| 160                            | QC21- Final Inspection - Work Order Release                       | 0.00                 |         |        |              |               |               |                  |                |
| <b>*160*</b>                   |   |                      |         |        |              |               |               |                  |                |
| QC                             | Memo  | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |   |                      |         |        |              |               |               |                  |                |

see  
w/o 8/6/55  
MF  
12-06-20

MCJ 12/06/20  
MF  
12-06-20



#### D3391-043 ASSEMBLY

#### D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

| QTY | PART NUMBER | DESCRIPTION             |
|-----|-------------|-------------------------|
| X   | D3391-043   | FLOAT SKIDTUBE ASSEMBLY |
| 1   | D3391-021   | FWD TUBE ASSEMBLY       |
| 1   | D3391-023   | MID TUBE ASSEMBLY       |
| 1   | D3391-025   | AFT TUBE ASSEMBLY       |
| 2   | D3591-1     | BUSHING                 |
| 1   | D4095-041   | WEARSHOE                |
| 1   | D4095-043   | WEARSHOE                |
| 1   | D4095-045   | WEARSHOE                |
| 1   | D4095-047   | WEARSHOE                |
| 1   | D4095-049   | WEARSHOE                |
| 1   | D4095-051   | WEARSHOE                |
| 24  | AN3C4A      | BOLT                    |
| 10  | AN3C6A      | BOLT                    |
| 4   | AN3C7A      | BOLT                    |
| 38  | AN960C10L   | WASHER                  |

#### GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"  
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES  
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT  
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH  
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND  
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

RELEASED  
2011-11-04

|   |   |   |              |
|---|---|---|--------------|
| DESIGN  | PH  | DART AEROSPACE USA, INC                     |              |
| DRAWN   | XDF   | KENT, WA                                    |              |
| CHECKED   |  | DRAWING NO.                                 | REV. 1       |
| MFG. APPR.  |  | D3391                                       | SHEET 2 OF 8 |
| APPROVED  |  | TITLE                                       | SCALE        |
| DE APPR.  |  | 412 FLOAT SKIDTUBE                          | NTS          |
| DATE  | 11.10.13  | COPYRIGHT © 2005 BY DART AEROSPACE USA, INC |              |
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**Instructions for RA 111377 D412-742-013 B83154 CHG  
007**

- Box was damaged see pictures
- Kit complete
- Aft cap is scrap **see pic**
- Fwd. cap is scrap **see pic**
  - Aft angle = **6.58\***
  - Fwd. angle = **13.0\***
  - Remove fwd. and aft wear plates and test fit saddles
- Needs new BATCH #
- Needs new Paper Work & Labels

**Time Estimate = 5 HOUR ONLY**  
**Departments Required: 4-FINISHING 1-STORES**  
**Pictures Attached = YES**

**Instructions for RA 111377 D412-742-013 B81083  
CHG007**

- Box was damaged see pictures
- Kit complete
- Aft cap is scrap **see pic** *D2646*
- Fwd. cap is scrap **see pic** *D344.241*
  - Aft angle = **6.0\***
  - Fwd. angle = **12.23\***
  - Remove fwd. and aft wear plates and test fit saddles
- Needs new BATCH #
- Needs new Paper Work & Labels

**Time Estimate = 5 HOUR ONLY (stores)**  
**Departments Required: 4-FINISHING 1-STORES**  
**Pictures Attached = YES**

**Work Order ID 86055****\*86055\***

Page 1

Wednesday, June 20, 2012 10:44:11 AM

Item ID: D412-742-043

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Replacement Float Skidtube

Start Date: 6/20/2012 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 6/20/2012 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: *muc*Date: *12-06-20* Tooling:

Date:

Run Start **\*NR1\***

QC:

Date: SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D3391

1

150

0.00

**\*150\***

QC

Memo

0.00

Quality Control

WORK ORDER WAS CREATED FOR TRI-BEAM TO BE ABLE TO PULL  
REWORK ONTO NEW D412-742-013.  
K-KIT WAS ALREADY SHIPPED OUT ON ORIGINAL W/O

160

QC21- Final Inspection - Work Order Release

0.00

**\*160\***

QC

Memo

0.00

Quality Control



# Picklist Print

Wednesday, June 20, 2012 10:44:10 AM

Page 1

Work Order ID: 86055

Parent Item: D412-742-043

Parent Item Name: Replacement Float Skidtube

Start Date: 6/20/2012

Required Date: 6/20/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev A 05.10.13 New Issue KJ/JLM  
 IPP Rev 06.02.13 ECN 773 dwg @ rev.D EC  
 IPP Rev:C 07-05-28 As per Rev F JLM  
 IPP Rev:D 07-12-04 ECN 1072 DD verified by:JLM  
 IPP Rev:E 08-09-08 ecn 08-510 DD verified by:EC  
 REV.B DD verified by:EC  
 IPP Rev:F 11.11.01 as per DSI9517

| Component Item ID/<br>Item Name             | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| D412-742-013<br>Float Skidtube Installation |                        | Manufactured  | No          |                     |                  |                 | Each               | 0.0000         |             | 1            |               |                |        |

85669